

CLAIMS

1. A mute circuit in a BTL circuit formed in an IC which drives a speaker by a first output stage amplifier and a second output stage amplifier which generates an inverted output signal with respect to an output signal of the first output stage amplifier, wherein the second output stage amplifier receives the output signal of the first output stage amplifier as an input and generates the inverted output signal, a switch circuit is provided between any one of the outputs of the first and second output stage amplifier and a terminal of the speaker and through a mute signal the switch circuit is turned OFF for a predetermined interval to effect muting.
2. A mute circuit according to claim 1, further comprising a mute signal generation circuit for generating the mute signal, wherein the second output stage amplifier receives the output signal of the first output stage amplifier via a resistor, the switch circuit is an analog switch and the mute signal is a pulse signal having a predetermined width which is generated when a power source is turned ON or OFF.
3. A mute circuit according to claim 2, wherein the mute signal generation circuit is an one shot circuit and the one shot circuit generates the pulse signal having a pulse width of less than a few tens m sec. in response to a turning ON signal of the power source.
4. A mute circuit according to claim 1, wherein each of the first and second output stage amplifier is an operational amplifier of which output stage is constituted by a push-pull structured transistors, the

switch circuit is constituted through turning OFF the respective transistors of one of the first output stage amplifier and the second output stage amplifier for a predetermined interval by the mute signal and an output of the one of the first output stage amplifier and the second output stage amplifier is set at a high impedance.

5. A mute circuit according to claim 4, wherein the second output stage amplifier receives the output signal of the first output stage amplifier via a resistor, the switch circuit is an analog switch and the mute signal is a pulse signal having a predetermined width which is generated when a power source is turned ON or OFF.

6. A BTL audio amplifier apparatus formed in an IC which drives a speaker by a first output stage amplifier and a second output stage amplifier which generates an inverted output signal with respect to an output signal of the first output stage amplifier, wherein the second output stage amplifier receives the output signal of the first output stage amplifier as an input and generates the inverted output signal, a first switch circuit is provided between any one of the outputs of the first and second output stage amplifier and a terminal of the speaker and through a mute signal the first switch circuit is turned OFF for a predetermined interval to effect muting.

7. A BTL audio amplifier apparatus according to claim 6, further comprising a mute signal generation circuit for generating the mute signal, wherein the second output stage amplifier receives the output signal of the first output stage amplifier via a resistor, the first switch circuit is an analog switch and the mute signal is a pulse

signal having a predetermined width which is generated when a power source is turned ON or OFF.

8. A BTL audio amplifier apparatus according to claim 7, wherein the mute signal generation circuit is an one shot circuit and the one shot circuit generates the pulse signal having a pulse width of less than a few tens m sec. in response to a turning ON signal of the power source.

9. A BTL audio amplifier apparatus according to claim 6, wherein each of the first and second output stage amplifier is an operational amplifier of which output stage is constituted by a push-pull structured transistors, the first switch circuit is constituted through turning OFF the respective transistors of one of the first output stage amplifier and the second output stage amplifier for a predetermined interval by the mute signal and an output of the one of the first output stage amplifier and the second output stage amplifier is set at a high impedance.

10. A BTL audio amplifier apparatus according to claim 9, wherein the second output stage amplifier receives the output signal of the first output stage amplifier via a resistor, the switch circuit is an analog switch and the mute signal is a pulse signal having a predetermined width which is generated when a power source is turned ON or OFF.

11. A BTL audio amplifier apparatus according to claim 10, further comprising a plurality of second switch circuits provided in any one of the first and second output stage amplifier, wherein the respective first and second output stage amplifier are provided with a plurality of drive circuits for driving the respective transistors,

and through interrupting operation currents of the plurality of drive circuits upon receiving the mute signal by the plurality of the second switch circuits and through turning OFF the transistors, any one of the outputs of the first and second output stage amplifier is set at a high impedance.

12. A BTL audio amplifier apparatus according to claim 11, wherein the drive circuit is a differential amplifier circuit, the second switch circuits interrupt the operation currents of the plurality of the differential amplifiers in the second output stage amplifier and turns OFF the transistors.